

WHAT IS CLAIMED IS:

1. A hard disk drive, comprising:
at least one rotatable disk;
at least one slider juxtaposed with the disk;
a suspension holding the slider; and
a roll static attitude (RSA) bias mechanism coupled to the suspension to establish a RSA of the slider.
2. The disk drive of Claim 1, wherein the RSA bias mechanism includes at least one piezoelectric structure bonded to the suspension.
3. The disk drive of Claim 1, further comprising a HDD controller actuating the RSA bias mechanism.
4. The disk drive of Claim 3, wherein the HDD controller actuates the RSA bias mechanism to establish a zero RSA during read and write operations.
5. The disk drive of Claim 3, wherein the HDD controller actuates the RSA bias mechanism to establish a non-zero RSA during ramp load and unload operations.
6. The disk drive of Claim 1, wherein the RSA is implemented by actuating the RSA bias mechanism to bend a flexure of the suspension to cause an inner edge of the slider to be higher relative to the disk than an outer edge of the slider.

7. A hard disk drive (HDD) comprising:
- at least one slider;
 - at least one roll static attitude (RSA) bias mechanism coupled to the slider to turn the slider; and
 - at least controller actuating the RSA bias mechanism to establish a zero RSA during a first condition and a non-zero RSA during a second condition.
8. The HDD of Claim 7, wherein the first condition is at least one of: reading from, and writing to, a disk, and the second condition is at least one of: loading the slider from, and unloading the slider to, a ramp.
9. The HDD of Claim 7, wherein the non-zero RSA is implemented by actuating the RSA bias mechanism to bend a flexure associated with the slider to cause an inner edge of the slider to be higher relative to a data storage surface than an outer edge of the slider.
10. The disk drive of Claim 7, wherein the RSA bias mechanism includes at least one piezoelectric structure bonded to a suspension associated with the slider.
11. A data storage device, comprising:
- data storage means for storing data;
 - data transfer means juxtaposed with the data storage means for communicating data therebetween;

roll static attitude (RSA) biasing means for establishing a RSA of the data transfer means; and

logic means for actuating the RSA biasing means to establish a non-zero RSA of the data transfer means at least during a first condition.

12. The data storage device of Claim 11, wherein the first condition is at least one of: loading the data transfer means from, and unloading the data transfer means to, a ramp.

13. The data storage device of Claim 11, wherein the logic means further is for actuating the RSA biasing means to establish a zero RSA of the data transfer means during at least one of: writing data to the data storage means, and reading data from the data storage means.

14. The data storage device of Claim 11, wherein the RSA biasing means is established at least in part by a piezoelectric element.